



Milk and meat samples are collected from local bovine herds.

Appendix C - 3

Summary of Biological Data

Table C - 3.1
1991 Radioactivity Concentrations in Milk ($\mu\text{Ci/mL}$)

LOCATION	DATE	H-3	Sr-90	I-129	Cs-134	Cs-137	K-40
BFMCOBO (WNW FARM)	<i>1st Qtr</i>	<1.14E-07	<7.8E-10	<3.60E-10	<2.60E-09	3.90 \pm 2.6E-09	1.30 \pm 0.1E-06
BFMCOBO (WNW FARM)	<i>2nd Qtr</i>	<1.02E-07	2.10 \pm 0.8E-10	<3.79E-10	<2.53E-09	<2.30E-09	1.37 \pm 0.1E-06
BFMCOBO (WNW FARM)	<i>3rd Qtr</i>	<9.00E-08	2.20 \pm 0.3E-09	<3.50E-10	<2.31E-09	3.20 \pm 2.4E-09	1.18 \pm 0.1E-06
BFMCOBO (WNW FARM)	<i>4th Qtr</i>	<9.10E-08	7.90 \pm 0.4E-09	<4.50E-10	<2.60E-09	<2.50E-09	1.20 \pm 0.1E-06
BFMCTLN (CONTROL)	<i>1st Qtr</i>	3.30 \pm 1.3E-07	2.10 \pm 0.3E-09	<4.80E-10	<2.32E-09	<2.35E-09	1.31 \pm 0.1E-06
BFMCTLN (CONTROL)	<i>2nd Qtr</i>	<9.51E-08	1.70 \pm 0.3E-09	<3.30E-10	<2.50E-09	<2.60E-09	1.24 \pm 0.1E-06
BFMCTLN (CONTROL)	<i>3rd Qtr</i>	1.20 \pm 0.9E-07	1.10 \pm 0.2E-09	<4.30E-10	<2.20E-09	<2.28E-09	1.23 \pm 0.1E-06
BFMCTLN (CONTROL)	<i>4th Qtr</i>	<9.21E-08	9.50 \pm 0.4E-09	<3.91E-10	<2.20E-09	<2.20E-09	9.18 \pm 0.9E-07
BFMCTLS (CONTROL)	<i>1st Qtr</i>	<1.09E-07	9.50 \pm 2.8E-10	<3.90E-10	<2.41E-09	<2.30E-09	1.35 \pm 0.1E-06
BFMCTLS (CONTROL)	<i>2nd Qtr</i>	<9.70E-08	9.20 \pm 2.5E-10	<2.86E-10	<2.40E-09	<2.20E-09	1.29 \pm 0.1E-06
BFMCTLS (CONTROL)	<i>3rd Qtr</i>	1.30 \pm 0.90E-07	1.60 \pm 0.2E-09	<3.31E-10	<2.20E-09	<2.50E-09	1.43 \pm 0.1E-06
BFMCTLS (CONTROL)	<i>4th Qtr</i>	<9.20E-08	2.30 \pm 0.2E-09	<3.80E-10	<2.30E-09	<2.20E-09	1.20 \pm 0.1E-06
BFMREED (NNW FARM)	<i>1st Qtr</i>	<1.06E-07	<1.37E-10	<3.00E-10	<2.46E-09	<2.40E-09	1.32 \pm 0.1E-06
BFMREED (NNW FARM)	<i>2nd Qtr</i>	<8.10E-08	1.10 \pm 0.1E-09	<2.42E-10	<2.18E-09	<2.14E-09	1.05 \pm 0.1E-06
BFMREED (NNW FARM)	<i>3rd Qtr</i>	1.30 \pm 0.9E-07	1.40 \pm 0.2E-09	4.80 \pm 3.9E-10	<2.70E-09	<3.00E-09	1.46 \pm 0.2E-06
BFMREED (NNW FARM)	<i>4th Qtr</i>	<9.50E-08	5.30 \pm 0.3E-09	<4.73E-10	<2.14E-09	<2.40E-09	9.98 \pm 1.0E-07
BFMWIDR (SE FARM)	<i>Annual</i>	<8.90E-08	2.70 \pm 0.3E-09	<3.61E-10	<1.90E-09	<2.10E-09	1.23 \pm 0.1E-06
BFMHAUR (SSW FARM)	<i>Annual</i>	<9.40E-08	1.50 \pm 0.6E-09	<3.40E-10	<2.40E-09	3.30 \pm 2.4E-09	7.78 \pm 0.8E-07

Table C - 3.2
1991 Radioactivity Concentrations in Meat ($\mu\text{Ci/g Dry}$)

LOCATION	%Moisture	H-3 ($\mu\text{Ci/mL}$)	Sr-90 ($\mu\text{Ci/g}$)	Cs-134 ($\mu\text{Ci/g}$)	Cs-137 ($\mu\text{Ci/g}$)	K-40 ($\mu\text{Ci/g}$)
DEER FLESH BACKGROUND (BFDCTRL#1)	72%	5.50 \pm 3.10E-07	1.00 \pm 0.60E-08	<1.05E-08	1.29 \pm 0.17E-07	9.98 \pm 1.00E-06
DEER FLESH BACKGROUND (BFDCTRL#2)	75%	<3.60E-07	9.70 \pm 6.30E-09	1.50 \pm 1.20E-08	8.30 \pm 2.04E-08	9.69 \pm 0.97E-06
DEER FLESH BACKGROUND (BFDCTRL#3)	76%	<1.40E-07	<8.40E-09	<1.20E-08	1.11 \pm 0.19E-07	1.23 \pm 0.12E-05
DEER FLESH NEAR-SITE (BFDNEAR#1)	70%	<3.00E-07	<5.80E-09	<1.01E-08	<1.18E-08	1.05 \pm 0.11E-05
DEER FLESH NEAR-SITE (BFDNEAR#2)	72%	2.80 \pm 1.60E-07	<6.20E-09	1.10 \pm 1.00E-08	6.45 \pm 1.65E-08	1.19 \pm 0.12E-05
DEER FLESH NEAR-SITE (BFDNEAR#3)	71%	<2.60E-07	<1.90E-09	<1.14E-08	5.99 \pm 1.65E-08	9.05 \pm 0.91E-06
BEEF FLESH BACKGROUND (BFBCTRL)6/91	N/A	N/A	<2.09E-09	<3.01E-09 ($\mu\text{Ci/gm wet}$)	3.90 \pm 2.90E-09 ($\mu\text{Ci/gm wet}$)	7.25 \pm 0.23E-06 ($\mu\text{Ci/gm wet}$)
BEEF FLESH BACKGROUND (BFBCTRL)6/91	N/A	N/A	<1.00E-10	<3.90E-09 ($\mu\text{Ci/gm wet}$)	5.00 \pm 3.60E-09 ($\mu\text{Ci/gm wet}$)	2.30 \pm 0.23E-06 ($\mu\text{Ci/gm wet}$)
BEEF FLESH BACKGROUND (BFBCTRL)11/91	74%	N/A	<7.90E-09	<7.50E-08	<7.20E-08	1.22 \pm 0.22E-05
BEEF FLESH NEAR-SITE (BFBNEAR)6/91	N/A	N/A	<2.38E-09	<2.82E-09 ($\mu\text{Ci/gm wet}$)	<2.60E-09 ($\mu\text{Ci/gm wet}$)	2.65 \pm 0.27E-07 ($\mu\text{Ci/gm wet}$)
BEEF FLESH NEAR-SITE (BFBNEAR)6/91	N/A	N/A	<2.90E-09	<3.40E-09 ($\mu\text{Ci/gm wet}$)	4.00 \pm 3.20E-09 ($\mu\text{Ci/gm wet}$)	2.59 \pm 0.26E-06 ($\mu\text{Ci/gm wet}$)
BEEF FLESH NEAR-SITE (BFBNEAR)11/91	61%	N/A	<5.40E-09	7.00 \pm 6.10E-08	<6.20E-08	5.97 \pm 0.14E-06

Table C - 3.3
1991 Radioactivity Concentrations in Food Crops ($\mu\text{Ci/g Dry}$)

LOCATION	% MOISTURE	H-3 ($\mu\text{Ci/mL}$)	Sr-90	K-40	Co-60	Cs-137
BEANS-BACKGROUND (BFVCTRL)	92%	N/A	7.70 \pm 1.30E-09	2.46 \pm 0.25E-05	<3.74E-08	<3.07E-08
BEANS NEAR-SITE (BFVNEAR)	83%	1.40 \pm 1.0E-07	1.50 \pm 0.30E-08	2.09 \pm 0.21E-05	<2.13E-08	<2.20E-08
APPLES-BACKGROUND (BFVCTRL)	88%	6.50 \pm 1.1E-07	7.80 \pm 1.70E-09	7.85 \pm 0.79E-06	<3.78E-08	<3.80E-08
APPLES NEAR-SITE (BFVNEAR)	83%	5.90 \pm 1.0E-07	6.60 \pm 2.0E-09	6.20 \pm 0.63E-06	<2.80E-08	<2.69E-08
CORN-BACKGROUND (BFVCTRL)	80%	6.80 \pm 0.7E-08	3.30 \pm 1.80E-09	1.08 \pm 0.11E-05	2.30 \pm 2.0E-08	<1.90E-08
CORN NEAR-SITE (BFVNEAR)	54%	N/A	3.60 \pm 2.20E-09	4.58 \pm 0.46E-06	<6.90E-09	<7.30E-09
HAY-BACKGROUND (BFHCTLS)	N/A	N/A	1.10 \pm 0.10E-07	2.58 \pm 0.26E-05	<3.02E-08	5.00 \pm 3.0E-08
HAY NEAR-SITE (BFHNEAR)	N/A	N/A	1.70E \pm 0.20E-07	<2.10E-06	<3.10E-08	<3.30E-08

Table C - 3.4
1991 Radioactivity Concentrations in Fish Flesh from
Cattaraugus Creek

Cattaraugus Creek (BFFCATC) above Springville Dam

	1st Half ($\mu\text{Ci/g wet}$)			2nd Half ($\mu\text{Ci/g dry}$)		
	<i>Sr-90</i>	<i>Cs-134</i>	<i>Cs-137</i>	<i>Sr-90</i>	<i>Cs-134</i>	<i>Cs-137</i>
Median	1.85E-08	<4.9E-08	<5.2E-08	4.8E-08	<2.9E-07	<2.36E-07
Geometric Deviation (Avg)	2.60	1.72	1.58	1.58	1.74	2.01
Maximum	6.20E-08	<7.3E-08	<9.2E-08	1.1E-07	<4.2E-07	<4.5E-07
Minimum	<3.5E-09	<1.9E-08	<2.9E-08	<3.0E-08	<1.4E-08	<1.4E-08
Moisture (Average %)	N/A			77.9		

Cattaraugus Creek (BFFCTRL) Background

	1st Half ($\mu\text{Ci/g wet}$)			2nd Half ($\mu\text{Ci/g dry}$)		
	<i>Sr-90</i>	<i>Cs-134</i>	<i>Cs-137</i>	<i>Sr-90</i>	<i>Cs-134</i>	<i>Cs-137</i>
Median	8.0E-09	<4.4E-08	<4.0E-08	4.0E-08	<2.3E-07	<2.8E-07
Geometric Deviation (Avg)	6.34	1.73	1.88	1.70	1.65	1.63
Maximum	1.7E-08	<9.2E-08	<8.1E-08	6.6E-08	<4.0E-07	<4.4E-07
Minimum	<3.1E-10	<2.2E-08	<2.0E-08	1.5E-08	<9.4E-08	<9.8E-08
Moisture (Average %)	N/A			78.1		

Cattaraugus Creek (BFFCATD) below the Springville Dam (Annual) *
($\mu\text{Ci/g dry}$)

	<i>Sr-90</i>	<i>Cs-134</i>	<i>Cs-137</i>
Median	1.6E-08	<1.3E-07	<1.4E-07
Geometric Deviation (Avg)	7.03	3.50	9.44
Maximum	9.5E-08	<6.3E-07	<5.9E-07
Minimum	<4.8E-09	<6.5E-08	5.9E-08
Moisture (Average %)	76.8		

* *Sample not collected for the first half of 1991.*
N/A - Not available